# GOVERNMENT OF INDIA
# SCIENCE AND TECHNOLOGY
# LOK SABHA

STARRED QUESTION NO:559
ANSWERED ON:04.05.2005
FORECASTING OF CYCLONE
Chaure Shri Bapu Hari

**Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:**

(a) whether the Government has devised any mechanism for forecasting cyclone;

(b) if so, the details thereof;

(c) the time period for advance forecasting of cyclone under the present set up ; and

(d) the measures taken to make the forecast accurate?

## Answer

MINISTER OF STATE (INDEPENDENT CHARGE) OF THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE (INDEPENDENT CHARGE) OF THE DEPARTMENT OF OCEAN DEVELOPMENT (SHRI KAPIL SIBAL)

(a) to (d) : A statement is laid on the Table of the House.

STATEMENT AS REFERRED IN REPLY TO THE PARTS (a) TO (d) OF THE LOK SABHA STARRED QUESTION No. 559 FOR 4-5-2005 REGARDING "FORECASTING OF CYCLONE"

(a) Yes, Sir.

(b) and (c): The India Meteorological Department (IMD) follows a four stage warning system for issuing warnings for tropical cyclones. A 'Pre-cyclone Watch" is issued whenever depression forms over the Bay of Bengal or Arabian Sea. This is followed by a "Cyclone Alert" issued 2-3 days in advance of commencement of bad weather along the coast. In the third stage, cyclone warnings are issued 1-2 days in advance, which specifies the expected place and time of landfall of the tropical cyclone. The final stage is known as "Post-landfall Outlook", which is issued 12 hours in advance of landfall and contains location specific forecast of landfall along with other warning details.

(d) Yes, Sir. Accuracy of cyclone forecast issued by IMD is generally on par with the accuracy of such forecasts issued by the tropical cyclone forecast services of other developed countries like USA, Japan and Australia etc. However, with the development of new observing systems such as buoys, Doppler Radars and new generation satellites, these forecasts are likely to improve further.

Four Doppler Weather Radars (DWRs) have started functioning along the east coast at Kolkata, Machilipatnam, Chennai and Sriharikota. The existing cyclone warning radar at Visakhapatnam will be replaced by DWR by the middle of this year. DWR has capability of providing accurate wind structure of tropical cyclone.

A dedicated geostationary meteorological satellite (now named Kalpana-I) was launched in September, 2002 and is providing high resolution cloud imageries in the visible, infra-red (IR) and water vapour channels. Similarly the INSAT-3A which was launched in April 2003, provides satellite imageries of 1 Km resolution. INSAT-3D is likely to be launched in 2006, which will have improved capabilities.